AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Patent Application No. 09/786,553

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the

application:

LISTING OF CLAIMS:

1.   (Currently Amended) A method of estimating a signal-to-noise ratio of a digital

signal received by a radiocommunications receiver, the method comprising:

estimating separately a wanted signal and a noise signal of the digital signal;

filtering separately the wanted signal and the noise signal; and

determining the signal-to-noise ratio by dividing the wanted signal which has been

filtered by the noise signal which has been filtered,

wherein the filtering of the noise signal comprises determining a noise value which is

used to determine the signal-to-noise ratio based on a statistical distribution of noise power

measurements for a predetermined period during which a statistically representative number of

measurement samples is collected and which is sufficiently short for the noise signal to remain

practically stationary,

wherein a first order auto-regressive infinite impulse response filter is used filter the

wanted signal as expressed by the equation:

$$\hat{x}_i = (1 - a)\,\tilde{x}_i + a\,\hat{x}_{i-1}$$

where $\tilde{x}_i$ represents an instantaneous estimate of the wanted signal at time i, $\hat{x}_i$

represents a smoothed estimate of the wanted signal at time i and a is an integration coefficient.

2.   (Previously Presented) A method according to claim 1, wherein the filtering of the wanted signal is different from the filtering of the noise signal.

3.   **(Canceled)**

4.   (Currently Amended) A method according to claim 1, wherein the noise value is determined such that a probability that an instantaneous noise level exceeds [[that]] the noise value is less than a predetermined threshold during the predetermined period.

5.   (Previously Presented) A method according to claim 1, wherein the noise value used to determine the signal-to-noise ratio is a maximum value of the measurement samples over the predetermined period.

6.   (Previously Presented) A method according to claim 1, wherein moments of the distribution are determined.

7.   (Previously Presented) A method according to claim 6, wherein an average μ and a variance σ^2 of the distribution are determined in that the noise value used is $\mu + n\sigma$, where σ is a standard deviation and n is a number determined according to the predetermined threshold.

8. (Previously Presented) A method according to claim 1, wherein a finite or infinite impulse response low-pass filter is used to filter the noise signal.

9. (Canceled)

10. (Canceled)

11. (Currently Amended) A method according to claim [[9]] 1, wherein a transmitter provides a reference signal with a regular period at a particular level and the reference signal is utilized as the wanted signal to estimate the signal-to-noise ratio.

12. (Canceled)

13. (Canceled)

14. (Currently Amended) A method according to claim [[12]] 1, wherein packets or cells are received sporadically and each packet or cell received is filtered.

15. (Previously Presented) A method according to claim 1, further comprising the signal-to-noise ratio controlling a transmit power of a corresponding transmitter based on the signal-to-noise ratio.